

CLAIM

1. A disk selecting device, comprising: a plurality of disk holding sections for holding a plurality of disks respectively; and a disk moving mechanism for separating a disk holding section, which is the object of selection, from other disk holding sections, wherein

the disk moving mechanism comprises:

an axis section which is provided in the vicinity of the disk holding sections and rotated by a drive mechanism;

a cylindrical drum cam into which the axis section is inserted and which is rotated in accordance with the rotation of the axis section;

a disk selecting cam which is formed on a periphery of the drum cam and leads the disk holding section, which is the object of selection, in a direction of separating the disk holding section from other disk holding sections; and

a transmitting section which is provided between the axis section and the drum cam, permits the rotation of the drum cam so that the disk selecting cam is withdrawn from the disk holding sections which are not the object of selection, and transmits drive power from the axis section to the drum cam.

2. The disk selecting device according to claim 1, further comprising a first biasing member which biases the plurality of disk holding sections in a direction in which the holding sections are brought close to one another.

3. The disk selecting device according to claim 1, wherein the transmitting section is a cylindrical drum sleeve into which the axis section is inserted so as to be able to move in an axial direction of the axis section, and the drum sleeve has a fixing section for fixing the drum cam to the axis section in accordance with the position of the movement of the drum sleeve, and a permitting section which can rotate the drum cam independently from the axis section.

4. The disk selecting device according to claim 1, further comprising:

a second biasing member which biases the drum sleeve to a fixing position at which the fixing section fixes the drum cam or a permitting position at which the permitting section permits the rotation of the drum cam; and

a pressing section which presses the drum sleeve in a direction against the second biasing member in accordance with the position of rotation of the drum sleeve, and thereby switches between the fixing position and the permitting position.

5. The disk selecting device according to claim 4, wherein the second biasing member is a spring which is disposed between the drum cam and the drum sleeve and biases the drum cam and the drum sleeve in a direction in which the disk selecting cam contacts with the disk holding section which is the object of selection.

6. The disk selecting device according to claim 1, wherein the disk holding section comprises a holding arm which is

provided displaceably between a closed position for contacting with a disk to hold the disk and an opened position for separating from the disk to release the disk, and a periphery of the drum cam is provided with an arm opening/closing cam which biases the holding arm in the disk holding section, which is the object of selection, to the opened position or the closed position.

7. The disk selecting device according to claim 6, further comprising a biasing member which biases the holding arm in a direction opposite to the biasing direction of the arm opening/closing cam.

8. The disk selecting device according to claim 6, wherein the arm opening/closing cam is disposed in the vicinity of the disk selecting cam.

9. The disk selecting device according to claim 6, wherein the arm opening/closing cam comprises a step for switching between whether or not to bias the holding arm.

10. The disk selecting device according to claim 9, wherein the disk selecting cam and the arm opening/closing cam are two rows of grooves having different depths and provided in parallel with each other, and a groove end of the arm opening/closing cam is provided with the step.

11. The disk selecting device according to claim 1, wherein the disk holding sections are disposed in a stacked manner and are provided so as to be able to move up and down individually, and each disk holding section is provided with a holding arm capable of being displaced between a closed position for

contacting with a disk to hold the disk and an opened position for separating from the disk to release the disk, and a regulating section which regulates displacement of the holding arm of an adjacent disk holding section.

12. The disk selecting device according to claim 11, wherein the holding arm is provided with a holding nib for holding an outer edge of the disk at the closed position, and the regulating section is a lock hole into which the holding nib is inserted.

13. The disk selecting device according to claim 12, further comprising a first biasing member which biases the plurality of disk holding sections in a direction in which the disk holding sections are brought close to one another.

14. The disk selecting device according to claim 11, further comprising a second biasing member which biases the holding arm to the closed position.

15. The disk selecting device according to claim 11, wherein the periphery of the drum cam is provided with an arm opening/closing cam which biases the holding arm in the disk holding section, which is the object of selection, to the opened position or the closed position.

16. A disk device comprising the disk selecting device described in any of claims 1 through 15, wherein the plurality of disk holding sections are disposed in a stacked manner, the disk device comprising:

a drive unit which plays a disk released from the disk

holding section, which is the object of selection;

a drive moving mechanism which moves the drive unit to a space formed by separating the disk holding sections; and

an elevating mechanism which moves at least the drum cam or disk holding section to a position at which the disk selecting cam and the disk holding section, which is the object of selection, are fitted with each other.